

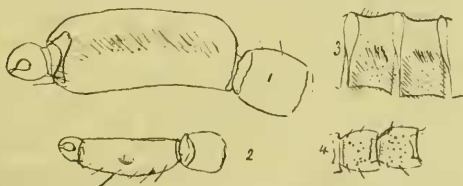
felt inclined to do little more than rest on reaching the cool of the garden. On the evening of August 3rd, however, my dormant energy was immediately aroused by friend Joy dashing in with a *Phryxus livornica*, which he had just netted in his garden a little way down the road. The net was once more requisitioned, and for several evenings watch was kept in the neighbourhood for other *P. livornica*, but none were met with. The specimen taken was caught hovering over white phlox; it was in fairly good condition, one wing being slightly chipped. *Rumicia phlaeas* now made its appearance, and, as was the case elsewhere, was common in the district. During August some nice imagines were bred from the *Ruralis betulae*, and *X. galiata* larvæ obtained earlier in the year. A visit to Oxted on the August Bank-holiday resulted in *Vanessa io* being seen and taken. On August 24th Oxshott was visited for *Agrotis agathina* and two were obtained in fair condition. A trip to Richmond Park at the end of the month resulted in *Heliophobus popularis*, *Characæa graminis*, *Noctua glareosa*, *Citria cerago*, and other species being taken. A flying visit to Haslemere at the beginning of September was not very productive, but a few pupæ of *Agriopsis aprilina* were dug from under oak. My season practically concluded with a short holiday at Lowestoft at the end of September. Here *Rumicia phlaeas* was again in evidence, *Pyrameis atalanta* was seen at the ivy blossoms in fine condition, and *P. cardui* and *Pararge megeera* (second brood) were met with, worn. *Agrilus cœvolvuli* was reported to be in the district, but I failed to meet with it. Pupa digging was resorted to, but nothing very special was taken in this way, nine-tenths of those dug being *Taeniocampa incerta*.

On a Gynandromorphous *Amorpha populi*. (With 2 plates.)

By T. A. CHAPMAN, M.D.

The Rev. C. R. N. Burrows has mounted the head and genitalia of a gynandromorphous *A. populi*, given to him by Mr. L. W. Newman, and has permitted me to examine the specimen. *Amorpha populi* appears to afford more gynandromorphs than any other Lepidopteron. Herr Bartel collected records of 73 in 1900, Tutt in 1902 refers to records of 79 specimens, and hardly a year passes without a record of one or more examples. It does not, however, happen that I have found any detailed account, or figure, of the genitalia of a specimen.

In Mr. Burrows' specimen the left side is male the right side female. The head shows a left ♂ antenna and a right ♀ one. The



Camera outlines of (1) left (♂) palpus, (2) right (♀), (3) Two joints of left (♂) antenna, about joints 13 or 14. (4) Two joints from right (♀) from about same position. × 15.

labial palpi differ largely in size, the left being 4.8mm. long, the right only 2.6mm. The left is even wider in proportion, but measurement would be misleading as the 2nd joint has been torn in mounting.

The structure of the genitalia will be better understood by reference to the photographs (by Mr. F. N. Clark) of Mr. Burrows' specimen, and of the normal ♂ and ♀ structures of normal specimens, which are presented herewith $\times 12\frac{1}{2}$. I have numbered the parts so as to show the correspondences.

It is curious that whilst there appears to be a complete ♀ side (left), there is not only the other (right) side (completely) ♂, but male structures of the left (or female) side are also represented. This is as in photograph, which happens to reverse the specimen.

Thus there are both branches of the uncus marked (1), and I have chosen as a normal (?) male for comparison, one with two branches unequal, which is not common. There are also the clasps of both sides, both valve (3) and harpe (4) being of fairly normal development in both cases. The aedœagus is not perfect, but its deficiency is not on one side. The distal portion (5) seems fairly normal (both right and left sides), but the basal portion (6) is shrunk and connected with the distal end by a very narrow neck. The female side is represented by the terminal flap of the ovipositor (2) with its rod (7), and by the portion of the plate of the 9th segment, which (see Pl. VI) is always a slight structure, but the rod (9) belonging to it is fairly normal. The vaginal structures (8), being only those of one side, are twisted out of very recognisable form.

It would perhaps have been even more interesting had the inner structure, ovaries, tubes, etc., been preserved, but they became no doubt injured and lost in the process of maceration.

DESCRIPTION OF PLATES V. and VI.

PLATE V.—Appendages of gynandromorphous *Amorpha populi* $\times 12\frac{1}{2}$.

PLATE VI.—Upper ♀, lower ♂, appendages of *Amorpha populi* $\times 12\frac{1}{2}$. The two divisions of the uncus (1) are unequal in the ♂ specimen, an interesting abnormality, otherwise the specimens are normal, and suitable for comparison with the specimen on Pl. V.

Leptosia duponcheli var. aestiva at Digne.

By W. G. SHELDON, F.E.S.

It was in the early days of August, 1906, I had landed at Nice in the morning, after a rough crossing from Ajaccio, and having travelled all day up the beautiful but stifflingly hot Gorge of the Var and across the Col de Vergons, had welcomed with relief the hospitable doors of the "Boyer-Mistre," at Digne. Dinner was being served on my arrival, and after a hasty wash I took the only vacant seat, about half way down the long table in the "Salle-à-manger." I was tired, and my powers of observation were dulled, and beyond noticing that my right hand neighbour was one of the largest men I had ever seen, I did not inspect my fellow diners. I was a course or two behind the others, and just as the dessert was reached my right hand neighbour retired. I turned towards the vacant seat to annex a peach from a dish on the table, when an expression burst forth from the occupant of the next chair, "Hallo, what on earth are *you* doing here?" and, looking towards him, I found I was addressed by the late Editor of this maga-

zine, Mr. J. W. Tutt, who was coming south as I was going north. It was a dramatic method of meeting, and a very welcome one to me, for Tutt's personality was to every one, at all times, an interesting one, and it was doubly interesting to me just then, for I had not heard a word of my mother tongue for several weeks.

This meeting led to a day's collecting together and much talk; amongst other matters we discussed the genus *Leptosia* that we found everywhere common. Tutt maintained that some of them, which were without dark markings on the underside, were *L. duponcheli* var. *aestiva*, Stgr.

The next day, my friend having gone still further south, I enlisted the services of the local professional entomologist Victor Cotte, and asked him in the course of our wanderings, what the summer brood of *L. duponcheli* was like. Cotte said it was scarce at Digne, but that he had taken a specimen a few weeks before. This I subsequently purchased and have now. It is indistinguishable from the spring form. I therefore concluded that Tutt was wrong, for Cotte knows the species to be found at Digne well, and is usually to be relied upon.

There the matter rested until last month, when happening to pick up Wheeler's *Butterflies of the Alps*, I found that the author describes var. *aestiva* as "with yellowish undersides." This shook my faith in Cotte's specimen, and after thinking the matter over, I took from my continental series of *L. sinapis* all the specimens collected at Digne during four visits I had made to that town, placed them in another drawer and studied them carefully. Almost at once I found a male that in the shape of the front wings agreed exactly with spring *L. duponcheli*, but which was entirely without dark markings beneath, and a further search showed that I had seven more specimens, five males and two females of this form, all these examples were taken from between July 11th and 16th, 1904, and were, I now feel pretty sure, *L. duponcheli* var. *aestiva*. I accordingly took them, with all the other hitherto supposed *L. sinapis* to the British Museum, and compared them with the series of both species in the National Collection. Amongst the *L. duponcheli* there I found eight examples which were without dark markings beneath, but these were *not* labelled var. *aestiva*. I also found amongst the *L. sinapis*, which were in another drawer, two more of this form of *L. duponcheli*, which were labelled var. *aestiva*. All these ten specimens were from Asia Minor. After comparing them with my examples captured at Digne I could only conclude that these were identical.

L. duponcheli var. *aestiva* is evidently common and well distributed at Digne, my examples coming—three from the Eaux Chaudes valley, one from La Collete, and four from the right bank of the Bléone, above the bridge leading to the railway station, which I have always found one of the most prolific localities for the spring emergence. Presumably, it was more abundant than *L. sinapis* in July, 1904, for I find I only brought back three males and two females of the latter species, which were respectively var. *diniensis* and var. *erysimi*, both of which forms were more attractive to the eye than the specimens I have since found to be var. *aestiva*.

The chief distinction between var. *aestiva* and *L. sinapis* var. *diniensis*, and which serves to distinguish them at a glance, is the shape of the front wings, which exactly resembles, in this respect, examples

of the spring brood in both sexes, with the comparatively straight costa and square apex, as compared with the much more rounded costa and apex of *L. sinapis* var. *diniensis*.

In the males the apical spots are as pronounced as in the spring brood, but they are not so large. Underneath, five of my examples are entirely without dark markings, though the other has a slight indication of a transverse band in the centre of the hindwings. The area at the apex of the front wings, which on the upperside is represented by the dark blotch, is of a pale lemon yellow, and the same colour obtains on the base of all the wings below and above.

The two females have the dark apical blotch showing very slightly on the upper surface, much more slightly than is the case in the spring brood. On the underside they have the central band on the hindwings showing rather prominently, otherwise they exactly resemble the males.

A good point of distinction between these two species is the antennæ; in *L. sinapis* the base of the club-head is white in front, this white patch is wanting in *L. duponcheli*.

Staudinger, who named var. *aestiva* from specimens taken by him at Amasia in Asia Minor—where he states that it was abundant—described it in *Horae Societatis Entomologicae Rossicae*, vol. iv., p. 222. His description of the Amasia specimens, and the examples in the National Collection, agree pretty closely with my Digne captures, except that the surface of the wings, both above and below, is a little more yellow in the *aestiva* form.

Obviously the example I purchased from Cotte was a belated spring emergence.

Since writing the above my friend Mr. P. W. Abbott, who accompanied me to Digne, in July, 1904, informs me that he brought back eight examples of *Leptosia*, and that after seeing my var. *aestiva*, he finds seven are that form, and only one is *L. sinapis*.

A Fortnight at Gavarnie. Hautes-Pyrénées.

By G. T. BETHUNE-BAKER, F.L.S., F.Z.S., F.E.S.

A twelve hours' journey brought us from Mende to Toulouse, where we arrived at about 8 o'clock in the evening, and as we had to be up betimes in the morning we were glad to go straight to bed after dinner. No doubt it was a very bad thing to do, but it did not seem to have had any ill effects in our case. We were down at 5.30 for our *petit déjeuner*, which was enjoyed greatly in the street before people generally were astir, and whilst the air was delightfully fresh. Our first change was at Lourdes, where we had two and a half hours to wait. Half an hour of this sufficed for a good meal, after which I left my friend (Mr. A. H. Jones) to have a needed siesta, whilst I went through the small town to see the far famed grotto with its church above it. It happened to be a quiet day with but few pilgrims, and of this I was glad, as I made my way through the winding street, the Boulevard de la Grotte. On the one side the Boulevard was lined with shops of all descriptions, for the great part, however, with but one object in view, *viz.*, the sale of mementos of "my Lady of Lourdes" and of all the cures wrought by her marvellous efficacy. The shops end at a small bridge beneath which flows the river, the Gave du Pau, beyond